a4 cont.

permanent magnets magnetized in a direction to magnetically couple the inner yoke with the outer yoke and arranged on the movable unit to be retained in a gap between the inner yoke and the outer yoke with a given spacing in parallel to the central axis so that directions of magnetization are opposite to each other, and a shaft integrated with the movable unit and pivotally supported on the bearings, said multiple of thin plates of said inner yoke being of the same shape and the same dimension and said inner yoke being formed such that a radius of an outer surface of said inner yoke with respect to said central axis is smaller than a radius of an inner surface of said movable unit by a predetermined length, and said multiple of thin plates of said outer yoke being of the same shape and the same dimension and said outer yoke being formed such that a radius of an inner surface of said outer yoke with respect to said central axis is greater than a radius of an outer surface of said movable unit by a predetermined length.

2. (Amended) A linear motor according to claim 1, wherein said pair of permanent magnets are magnetized in the radial direction around the central axis.

4. (Amended) A linear motor according to claim 1 or 2, wherein a radius of curvature of an inner periphery of the outer yoke is equal to a radius of curvature of an inner periphery of the slot, and a radius of curvature of an outer periphery of the outer yoke is equal to a radius of curvature of an outer periphery of the slot, and the radius of curvature of the outer periphery of the outer yoke or the slot is greater than the radius of curvature of the inner periphery of the outer yoke or the slot.

5. (Amended) A linear motor according to claim 2, wherein an outer peripheral end of each of the outermost sides in the laminating direction of the thin plates of the inner yoke and an end surface of the permanent magnet are on a line, which connects an inner peripheral end of each of the outermost sides in the laminating direction of the thin plates of the outer yoke with the intersection of the X-axis and the Y-axis.

a4 cancel

6. (Amended) A linear motor according to claim 1 or 2, wherein two of said inner yoke are arranged symmetrically with respect to Y-axis, and two of said inner yoke are integrated by two inner yoke support members disposed inside the inner yokes and positioned separately in a direction of the Y-axis.

a5

10. (Amended) A linear compressor, comprising a movable unit in cylindrical shape having its central axis at the intersection of an X-axis and Y-axis, an inner yoke arranged at the inner side of the movable unit with a given spacing in the radial direction of the movable unit between said inner yoke and said movable unit, and being formed by laminating a multiple of thin plates each in approximately rectangular shape and having strong magnetic permeability in parallel to one of the X-axis or Y-axis, an outer yoke arranged at the outer side of the movable unit with a given spacing in a radial direction of the movable unit between said outer yoke and said movable unit, being formed by laminating a multiple of thin plates each in approximately rectangular shape and having strong magnetic permeability arranged in the same direction as the thin plates of the inner yoke, and forming a first magnetic pole, a second magnetic pole, and a third magnetic pole defined by two slots which are cut out in the laminating direction of the thin plates, a coil wound on the second magnetic pole of the outer yoke and for forming alternately different magnetic poles at the first magnetic pole, the second magnetic pole, and the third magnetic pole, a base for retaining the inner yoke and the outer yoke, bearings mounted on the base to be positioned at the center of X-axis and Y-axis, a pair of permanent magnets magnetized in a direction to magnetically couple the inner yoke with the outer yoke and arranged on the movable unit to be retained in a gap between the inner yoke and the outer yoke with a given spacing in parallel to the central axis so that directions of magnetization are opposite to each other, and a shaft integrated with the movable unit and pivotally supported on the bearings, said multiple of thin plates of said inner yoke being of the same shape and the same dimension and said inner yoke being formed such that a radius of an outer surface of said inner yoke with respect to said central axis is smaller than a radius of an inner surface of said movable unit by a predetermined length, and said multiple of thin plates of said outer yoke being of the

a5 cncld.

same shape and the same dimension and said outer yoke being formed such that a radius of an inner surface of said outer yoke with respect to said central axis is greater than a radius of an outer surface of said movable unit by a predetermined length, a piston mounted at a forward end of a shaft integrated with the movable unit and placed in the cylinder, and a spring mounted on the shaft.

Please add the following new claims:

a6

11. (New) A linear motor, comprising a movable unit in cylindrical shape having its central axis at the intersection of an X-axis and Y-axis, an inner yoke arranged at the inner side of the movable unit with a given spacing in the radial direction of the movable unit between said inner yoke and said movable unit, and being formed by laminating a multiple of thin plates each in approximately rectangular shape and having strong magnetic permeability in parallel to one of the X-axis or Y-axis, an outer yoke arranged at the outer side of the movable unit with a given spacing in a radial direction of the movable unit between said outer yoke and said movable unit, being formed by laminating a multiple of thin plates each in approximately rectangular shape and having strong magnetic permeability arranged in the same direction as the thin plates of the inner yoke, and forming a first magnetic pole, a second magnetic pole, and a third magnetic pole defined by two slots which are cut out in the laminating direction of the thin plates, a coil wound on the second magnetic pole of the outer yoke and for forming alternately different magnetic poles at the first magnetic pole, the second magnetic pole, and the third magnetic pole, a base for retaining the inner yoke and the outer yoke, bearings mounted on the base to be positioned at the center of X-axis and Y-axis, a pair of permanent magnets magnetized in a direction to magnetically couple the inner yoke with the outer yoke and arranged on the movable unit to be retained in a gap between the inner yoke and the outer yoke with a given spacing in parallel to the central axis so that directions of magnetization are opposite to each other, and a shaft integrated with the movable unit and pivotally supported on the bearings, a radius of curvature of an inner periphery of the outer yoke being equal to a radius of curvature of an inner periphery of the slot, and a radius of curvature of an outer periphery of the outer yoke is equal to a

radius of curvature of an outer periphery of the slot, and the radius of curvature of the outer periphery of the outer yoke or the slot being greater than the radius of curvature of the inner periphery of the outer yoke or the slot.

a6 cont.

12. (New) A linear motor according to claim 11, wherein an outer peripheral end of each of the outermost sides in the laminating direction of the thin plates of the inner yoke and an end surface of the permanent magnet are on a line, which connects an inner peripheral end of each of the outermost sides in the laminating direction of the thin plates of the outer yoke with the intersection of X-axis and Y-axis.

13. (New) A linear motor, comprising a movable unit in cylindrical shape having its central axis at the intersection of an X-axis and Y-axis, an inner yoke arranged at the inner side of the movable unit with a given spacing in the radial direction of the movable unit between said inner yoke and said movable unit, and being formed by laminating a multiple of thin plates each in approximately rectangular shape and having strong magnetic permeability in parallel to one of the X-axis or Y-axis, an outer yoke arranged at the outer side of the movable unit with a given spacing in a radial direction of the movable unit between said outer yoke and said movable unit, being formed by laminating a multiple of thin plates each in approximately rectangular shape and having magnetic permeability arranged in the same direction as the thin plates of the inner yoke, and forming a first magnetic pole, a second magnetic pole, and a third magnetic pole defined by two slots which are cut out in the laminating direction of the thin plates, a coil wound on the second magnetic pole of the outer yoke and for forming alternately different magnetic poles at the first magnetic pole, the second magnetic pole, and the third magnetic pole, a base for retaining the inner yoke and the outer yoke, bearings mounted on the base to be positioned at the center of X-axis and Y-axis, a pair of permanent magnets magnetized in a direction to magnetically couple the inner yoke with the outer yoke and arranged on the movable unit to be retained in a gap between the inner yoke and the outer yoke with a given spacing in parallel to the central axis so that directions of magnetization are opposite to each other, and a shaft integrated with the movable unit and

pivotally supported on the bearings, two of said inner yoke being arranged symmetrically with respect to Y-axis, and said two inner yokes are integrated by two inner yoke support members disposed inside the inner yokes and positioned separately in a direction of Y-axis.

a6 cncd

14. (New) A linear motor according to claim 13, wherein the inner yoke support members are made of a nonmagnetic material.